

CLAIMS

WE CLAIM:

1. A distributed navigation system comprising a client and a remote server, wherein
a method of providing distributed navigation to a user via the client comprises:
 - 5 selecting a destination wherein a user selects the destination;
 - determining a user's initial position via the server;
 - calculating a nominal route to the destination via the server;
 - sending information from the server to the client wherein the information
comprises navigation information related to the nominal route and mapping
10 information of a corridor area surrounding the nominal route;
 - providing navigation guidance to the user, wherein the navigation guidance is
provided from the client to the user; and
 - monitoring any user deviation from the nominal route.
- 15 2. The method of Claim 1, wherein the user selects the destination from a list of
user's most recent destinations.
3. The method of Claim 1, wherein the user selects the destination from a
preplanned trip itinerary.
- 20 4. The method of Claim 1, wherein the user selects the destination from an address
book list.

5. The method of Claim 1, wherein the user's initial position does not constitute a map address.

6. The method of Claim 5, wherein the server guides the user to an actual address
5 before calculating the nominal route.

7. The method of Claim 1, wherein the server sends routing information for entire nominal route to the client.

10 8. The method of Claim 1, wherein the server sends routing information for a partial nominal route to the client as the user travels along the nominal route.

9. The method of Claim 1, wherein the corridor area comprises an area of constant radius on either side of the nominal route.

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10. The method of Claim 1, wherein the corridor area comprises an area of varying distance on either side of the nominal route.

11. The method of Claim 1, wherein the server sends mapping information for the
20 corridor area surrounding the entire nominal route to the client.

12. The method of Claim 1, wherein the server sends mapping information for the corridor area surrounding a partial nominal route to the client.

13. The method of Claim 12, wherein the client discards mapping information for the corridor area surrounding the partial nominal route as the user travels outside of the partial nominal route.

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14. The method of Claim 1, wherein the mapping information for the corridor area comprises a set of full map information within a designated area around the nominal route.

10 15. The method of Claim 1, wherein the mapping information for the corridor area comprises a set of selected paths within a designated area around the nominal route.

16. The method of Claim 1, further comprising the step of recalculating a new route to the destination.

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17. The method of Claim 16, wherein the server automatically initiates the recalculating of the new route independently.

18. The method of Claim 17, further comprising the step of sending information
20 comprising navigation information related to the new route or mapping information of a corridor area surrounding the new route from the server to the client.

19. The method of Claim 16, wherein the client recalculates the new route independently according to a set of mapping information of the corridor area surrounding the nominal route.

5 20. The method of Claim 19, wherein the client leads the user back to the nominal route.

21. The method of Claim 19, wherein the client calculates an alternate new route to the destination according to the mapping information of the corridor area surrounding the
10 nominal route.

22. The method of Claim 16, wherein the client guides the user towards the destination concurrently to the client requesting the server to calculate a new route to the destination.

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23. A distributed navigation system comprising a client and a remote server, wherein a method of providing distributed navigation to a user via the client comprises:

- selecting a destination wherein a user selects the destination;
- determining a user's initial position at the server;
- 20 calculating a nominal route to the destination via the server;
- sending information from the server to the client wherein the information comprises navigation information related to the nominal route;

providing navigation guidance to the user, wherein the navigation guidance is provided from the client to the user; and
detecting a communication event between the server and the client.

5 24. The method of Claim 23, wherein the server sends mapping information for a corridor area surrounding the nominal route to the client along with navigation information for the nominal route.

25. The method of Claim 24, further comprising the step of sending a request for a set
10 of additional information or updates from the client to the server.

26. The method of Claim 25, further comprising the step of sending the requested set of additional information or updates from the server to the client.

15 27. The method of Claim 26, further comprising the step of determining by the client if the set of additional information or updates significantly impacts the route on which the user is traveling towards the destination.

28. The method of Claim 27, wherein the set of additional information or updates
20 significantly impacts the route on which the user is traveling.

29. The method of Claim 28, further comprising the step of presenting the user with a reroute option.

30. The method of Claim 29, wherein the user chooses the reroute option.

31. The method of Claim 30 further comprising the step of recalculating a new route
5 to the destination.

32. The method of Claim 31, wherein the server initiates recalculating the new route.

33. The method of Claim 32, further comprising the step of sending from the server to
10 the client a set of additional information comprising navigation information related to the
new route and mapping information of a corridor area surrounding the new route.

34. The method of Claim 31, wherein the client recalculates the new route
independently according to the mapping information of the corridor area surrounding the
15 nominal route.

35. The method of Claim 34, wherein the client leads the user back to the nominal
route.

20 36. The method of Claim 34, wherein the client calculates an alternate new route to
the destination according to the mapping information of the corridor area surrounding the
nominal route.

37. The method of Claim 31, wherein the client guides the user towards the destination concurrently to the client requesting the server to calculate a new route to the destination.

- 5 38. A distributed navigation system comprising a client and a remote server, wherein a method of providing distributed navigation to a user via the client comprises:
- (a) selecting a destination wherein a user selects the destination;
 - (b) determining the user's initial position at the server;
 - (c) calculating a nominal route to the destination at the server;
 - 10 (d) sending a set of information from the server to the client wherein the set of information comprises navigation information related to the nominal route and mapping information of a corridor area surrounding the nominal route;
 - (e) providing navigation guidance to the user, wherein the navigation guidance is provided from the client to the user;
 - 15 (f) detecting if user has deviated from the nominal route, wherein if user deviation from the nominal route is detected, further comprising the step of calculating a new route to the destination;
 - (g) sending information from the server to the client wherein the information comprises navigation information related to the new route and mapping
 - 20 information of a corridor area surrounding the new route; and
 - (h) repeating steps (e) – (g) until the user has reached the destination.

39. A distributed navigation system comprising:

a client for sending a routing request for a set of routing information to a destination,
wherein the request comprises sending a set of position coordinates; and

a server for receiving the routing request from the client and in response thereto
5 executing one or more of the following functions: accessing one or more databases,
generating a nominal route to the destination according to the set of position coordinates,
and sending to the client navigation information of the nominal route along with mapping
information for a corridor area surrounding the nominal route.

10 40. The distributed navigation system of Claim 39, further comprising a wireless
carrier coupled to the client for receiving the routing request from the client and also
coupled to the server for relaying the routing request from the client to the server.

41. The distributed navigation system of Claim 40, further comprising one or more
15 direct links coupled to the wireless carrier to receive the routing request from the wireless
carrier and also coupled to the server for relaying the request from the wireless carrier to
the server.

42. The distributed navigation system of Claim 40, further comprising a gateway
20 coupled to the wireless carrier for receiving the routing request from the wireless carrier
and also coupled to the server for relaying the routing request from the wireless carrier to
the server.

43. The distributed navigation system of Claim 42, further comprising a network coupled to the gateway for receiving the routing request from the gateway and also coupled to the server for relaying the routing request from the gateway to the server.

- 5 44. A distributed navigation system comprising:
- a server for receiving a navigation request, accessing one or more databases, generating a nominal route to the destination according to the set of position coordinates, and sending navigation information of the nominal route along with mapping information for a corridor area surrounding the nominal route to the client; and
- 10 a client for receiving the navigation information of the nominal route and mapping information for the corridor area surrounding the nominal route from the server.

45. The distributed navigation system of Claim 44, further comprising one or more direct links coupled to the server for receiving the navigation information and the
- 15 mapping information, and also coupled to the client for relaying the routing directions.

46. The distributed navigation system of Claim 45, further comprising a wireless carrier coupled to the direct links for receiving the navigation information and the mapping information, and also coupled to the client for relaying the routing directions.
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47. The distributed navigation system of Claim 44, further comprising a network coupled to the server for receiving the navigation information and the mapping information, and also coupled to the client for relaying the routing directions.

48. The distributed navigation system of Claim 47, further comprising a gateway coupled to the network for receiving the navigation information and the mapping information, and also coupled to the client for relaying the routing directions.

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49. The distributed navigation system of Claim 48, further comprising a wireless carrier coupled to the gateway for receiving the navigation information and the mapping information, and also coupled to the client for relaying the routing directions.

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